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| Mr. Michael T. Davis  Pre-Calculus | | 3.3 Applications of Exponential Functions (1)  February 14-15, 2017 | |
| Name: | |

1. Alexis deposited $1,000 in an interest-bearing savings account for five years. The annual interest rate is 5%, and the interest is compounded one time at the end of each year. What will be the future value of the investment at the end of the five-year investment period?
2. Isaiah deposited $2,000 in an interest-bearing savings account for ten years. The annual interest rate is 6%, and the interest is compounded monthly. What will be the future value of the investment at the end of the ten-year investment period?
3. Anasia deposited $3,000 in an interest-bearing savings account for fifteen years. The annual interest rate is 7%, and the interest is compounded weekly. What will be the future value of the investment at the end of the fifteen-year investment period?
4. Elijah deposited $4,000 in an interest-bearing savings account for twenty years. The annual interest rate is 8%, and the interest is compounded daily. What will be the future value of the investment at the end of the twenty-year investment period?
5. Kayla deposited $5,000 in an interest-bearing savings account for twenty-five years. The annual interest rate is 4%, and the interest is compounded continuously. What will be the future value of the investment at the end of the twenty-five-year investment period?
6. Reno deposited $6,000 in an interest-bearing savings account for thirty years. The annual interest rate is 3%, and the interest is compounded every six months. What will be the future value of the investment at the end of the thirty-year investment period?
7. Marcus deposited $7,000 in an interest-bearing savings account for thirty-five years. The annual interest rate is 2%, and the interest is compounded monthly. What will be the future value of the investment at the end of the thirty-five-year investment period?
8. Eboni deposited $8,000 in an interest-bearing savings account for forty years. The annual interest rate is 9%, and the interest is compounded weekly. What will be the future value of the investment at the end of the forty-year investment period?
9. Trent deposited $9,000 in an interest-bearing savings account for forty-five years. The annual interest rate is 1%, and the interest is compounded daily. What will be the future value of the investment at the end of the forty-five-year investment period?
10. Chloe deposited $10,000 in an interest-bearing savings account for fifty years. The annual interest rate is 4.5%, and the interest is compounded continuously. What will be the future value of the investment at the end of the fifty-year investment period?
11. Kayla has 894 mg of radium-226, a radioactive isotope, with a half-life of 1,600 years. How many grams of the isotope will be radioactive after 1,000 years have passed?
12. Kayla has 2,305 mg of silver-108, a radioactive isotope, with a half-life of 418 years. How many mg of the isotope will be actively radioactive after 300 years have passed?
13. Kayla has 1,520 mg of argon-39, a radioactive isotope, with a half-life of 269 years. How many mg of the isotope will be actively radioactive after 500 years have passed?
14. Reno deposits $500 in an interest-bearing savings account. Over the years, he observes that his money doubles in value every 12 years. What is the value of his investment after 8 years?
15. Jewel deposits $500 in an interest-bearing savings account. Over the years, she observes that her money doubles in value every 12 years. What is the value of her investment after 16 years?
16. Dana deposits $500 in an interest-bearing savings account. Over the years, he observes that his money triples in value every 20 years. What is the value of his investment after 45 years?